Forms and functions: implicitness of discourse relations

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Understanding the structure of discourse relations in the text represents two tasks for the recipients: identification of the discourse relation (i.e. revealing the very connection between two arguments in the text) and its semantic interpretation. For explicit discourse relations, both the presence of the discourse relation and its semantic type are signaled by a discourse connective. In the case of implicit discourse relations, it is necessary to infer both from the content of potential arguments, or from additional signals, such as verb categories.

In a corpus-based analysis, we examined relations between several factors of discourse structure: semantics of a discourse relation (e.g., concession), syntactic realization (intra-sentential vs inter-sentential), and form of expression (explicit / implicit). We describe prototypical forms of different semantic types as they occur in the PDiT-EDA 1.0 corpus of Czech written texts (Zikánová et al., 2018). These results can be used for automatic prediction of discourse relations or for psycholinguistic studies on predicting discourse relations.

Some of the semantic types were further examined in self-paced reading experiments. We focused on the intelligibility of the implicit contrastive and temporal discourse relations. The results of the experiments show that explicit discourse connectives are important for the comprehension of contrastive relations; in temporal relations, they do not play a significant role.

References: • Hoek, J., Evers-Vermeul, J. & T. J. M. Sanders (2015). The role of expectedness in the implicitation and explicitation of discourse relations. In Proceedings of the Second Workshop on Discourse in Machine Translation (DiscoMT). Lisbon: Association for Computational Linguistics, 41–46.

https://jethoek.github.io/publications/Hoeketal2016.pdf • Webber, B., Rohde, H., Dickinson, A., Louis, A. & N. Schneider (2018). Explicit Discourse Connectives / Implicit Discourse Relations. In Proceedings of the Society for Computation in Linguistics, Vol. 1, Article 40, 228–230. https://scholarworks.umass.edu(scil(vol1/iss1/4 • Zikánová, Š., Mírovský, J. & P. Synková (2019). Explicit and Implciit Discourse Relations in the Prague Discourse Treebank. In K. Ekštein (ed.), *Proceedings of the 22nd International Conference on Text, Speech and Dialogue – TSD 2019, Lecture Notes in Computer Science*, vol. 11697. Cham / Heidelberg / New York / Dordrecht / London: Springer, 236–248. • Zikánová, Š., Synková, P. & J. Mírovský (2018). *Enriched Discourse Annotation of Prague Discourse Treebank Subset 1.0 (PDiT-EDA 1.0)*. Prague: LINDAT/CLARIN digital library, Faculty of Mathematics and Physics, Charles University. <u>http://hdl.handle.net/11234/1-</u>2906